Consumption of Risky Foods among persons at High Risk for Severe Foodborne Diseases in the FoodNet Site: Room for Improved Targeted Prevention Messages

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Background: Foodborne disease is a major public health problem, of particular concern in populations most at risk for severe consequences, including the elderly, persons with immunocompromising conditions, and those taking immunosuppresive drugs. Because these populations are growing in the United States it is critical to understand their risky food consumption patterns to assess and design targeted prevention messages.

Methods: The Emerging Infections Program's Foodborne Diseases Active Surveillance Network (FoodNet) conducts surveys of the general population that collect information on consumption of specific food items, medical conditions, and demographic characteristics. From February 1998 through February 1999, we used random digit dialing to sample households within 7 FoodNet sites (California, Connecticut, Georgia, Maryland, Minnesota, New York, and Oregon). This analysis focuses on respondents aged 2-18 years. We analyzed whether or not each of 10 risky food items were consumed in the 7 days before the interview (pink chicken, pink turkey, pink burgers, pink ground pork, raw fresh fish, raw shellfish, raw milk, runny eggs, alfalfa sprouts, and unpasteurized applejuice/cider). We assessed the associations of risky food consumption with gender, age group (18-44, 45-64, and >65), immunocompromising condition status, taking immunosuppressive drugs, income, and education.

Results: Of the 10,209 subjects in the analysis, 62.2% ate none of the 10 risky foods, 28.2% ate one, 7.4% ate two, and 2.2% ate three or more. The most common risky food item was runny eggs consumed by 17.6% and the least common was pink ground pork consumed by 0.2%. More men reported eating any risky foods than women (42.6% vs. 34.2%, $p<0.01$). Age was strongly associated with consumption of risky foods; persons aged >65 years were less likely to eat any risky foods (32.9%) compared to those aged 18-44 (37.7%) ($p<0.01$). In the youngest age category (18-44), persons with immunosuppressive conditions were more likely to eat risky foods (53.3%) than other persons . (37.7%) ($p<0.01$). In the oldest age category (>65), persons taking immunosuppresive drugs were more likely to eat risky foods (44.0%) than other persons (32.9%) ($p<0.05$). Both immunosoppresive conditions and young age remained significantly associated with consumption of risky foods in a multivariate logistic regression model controlling for gender, income, and education.

Conclusion: Young adults aged 18-44 years with immunocompromising conditions, such as HIV infection, and older persons aged >65 years who take immunosuppresive drugs, such as prednisone, report eating more risky foods than their respective healthy counterparts. The reasons for this are unclear since these populations are at increased risk for severe disease, there is room for improved foodborne disease prevention messages to target these groups.

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